

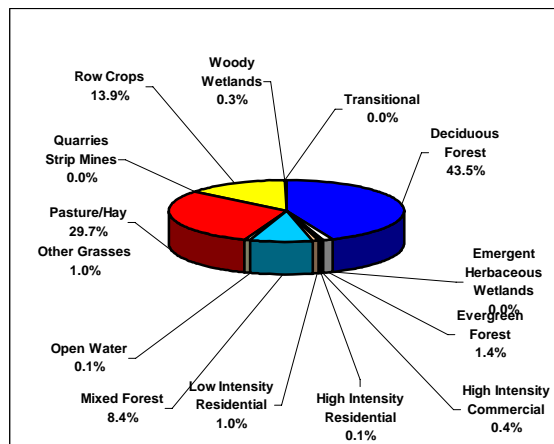
## Summary – Barren River Watershed

In 1996, the Tennessee Department of Environment and Conservation Division of Water Pollution Control adopted a watershed approach to water quality. This approach is based on the idea that many water quality problems, like the accumulation of point and nonpoint pollutants, are best addressed at the watershed level. Focusing on the whole watershed helps reach the best balance among efforts to control point sources of pollution and polluted runoff as well as protect drinking water sources and sensitive natural resources such as wetlands. Tennessee has chosen to use the USGS 8-digit Hydrologic Unit Code (HUC-8) as the organizing unit.

The Watershed Approach recognizes awareness that restoring and maintaining our waters requires crossing traditional barriers (point vs. nonpoint sources of pollution) when designing solutions. These solutions increasingly rely on participation by both public and private sectors, where citizens, elected officials, and technical personnel all have opportunities to participate. The Watershed Approach provides the framework for a watershed-based and community-based approach to address water quality problems.

Chapter 1 of the Barren River Watershed Water Quality Management Plan discusses the Watershed Approach and emphasizes that the Watershed Approach is not a regulatory program or an EPA mandate; rather it is a decision-making process that reflects a common strategy for information collection and analysis as well as a common understanding of the roles, priorities, and responsibilities of all stakeholders within a watershed. Traditional activities like permitting, planning and monitoring are also coordinated in the Watershed Approach.

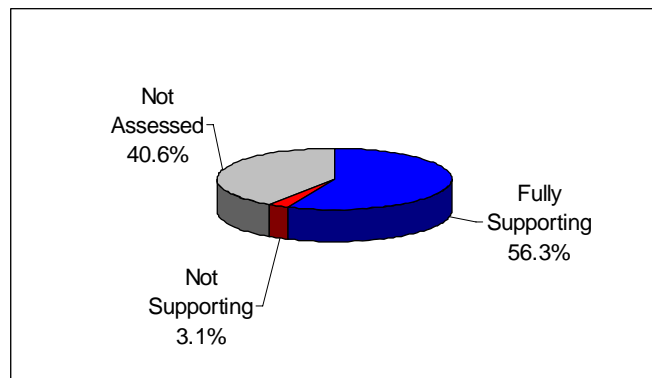
A detailed description of the watershed can be found in Chapter 2. The Barren River Watershed is approximately 1,661 square miles (432 mi<sup>2</sup> in Tennessee) and includes parts of three Tennessee counties. A part of the Ohio River drainage basin, the watershed has 563.2 stream miles and 45 lake acres in Tennessee.



*Land Use Distribution in the Tennessee Portion of the Barren River Watershed.*

Twelve rare plant and animal species have been documented in the watershed, including seven rare fish species and one rare snail species.

A review of water quality sampling and assessment is presented in Chapter 3. Using the Watershed Approach to Water Quality, 201 sampling events occurred in the Barren River Watershed in 2000-2005. These were conducted at ambient, ecoregion or watershed monitoring sites. Monitoring results support the conclusion that 94.7% of stream miles and 100% of lake acres assessed fully support one or more designated uses.



*Water Quality Assessment of Streams and Rivers in the Barren River Watershed. Assessment data are based on the 2004 Water Quality Assessment of 563.2 stream miles in the watershed.*

Also in Chapter 3, a series of maps illustrate overall use support in the watershed, as well as use support for the individual uses of Fish and Aquatic Life Support, Recreation, Irrigation, and Livestock Watering and Wildlife. Another series of maps illustrate streams that are listed for impairment by specific causes (pollutants) such as pathogens, habitat alteration, and nutrient enrichment, and siltation.

Point and Nonpoint Sources are addressed in Chapter 4. Chapter 4 is organized by HUC-12 subwatersheds. Maps illustrating the locations of STORET monitoring sites and stream gauging stations are also presented in each subwatershed.

HUC-10	HUC-12
0511000201	051100020101 (Upper West Fork)
	051100020102 (Lower West Fork)
0511000204	051100020403 (Treeline Creek)
	051100020404 (Barren River)
	051100020405 (Puncheon Creek)
	051100020406 (Pinchgut Creek)
	051100020407 (Long Hungry Creek)
	051100020408 (Long Creek)
0511000205	051100020501 (Salt Lick Creek)
	051100020502 (Long Fork)
0511000208	051100020801 (Trammel Creek)
	051100020802 (Little Trammel Creek)
0511000209	051100020901 (Middle Fork)
	051100020902 (Sulfur Fork)

*The Tennessee Portion of the Barren River Watershed is Composed of fourteen USGS-Delineated Subwatersheds (12-Digit Subwatersheds).*

Point source contributions to the Tennessee portion of the Barren River Watershed consist of eight individual NPDES-permitted facilities, three of which discharge into streams that have been listed on the 2004 303(d) list. Other point source permits in the watershed are Tennessee Multi-Sector Permits (12), Concentrated Animal Feeding Operation Permits (10), Aquatic Resource Alteration Permits (8), Ready Mix Concrete Plant Permits (3), and Water Treatment Plant Permits (1). Agricultural operations include cattle, chicken, hog, and sheep farming. Maps illustrating the locations

of permit sites and tables summarizing livestock practices are presented in each subwatershed.

Chapter 5 is entitled *Water Quality Partnerships in the Barren River Watershed* and highlights partnerships between agencies and between agencies and landowners that are essential to success. Programs of federal agencies (Natural Resources Conservation Service, U.S. Fish and Wildlife Service, and U.S. Geological), and state agencies (TDEC/State Revolving Fund, TDEC Division of Water Supply, Tennessee Department of Agriculture, and Kentucky Division of Water) are summarized. Local initiatives of organizations active in the watershed (Central Basin RC&D Council, The Nature Conservancy, and Hull-York Lakeland RC&D Council) are also described.

Point and Nonpoint source approaches to water quality problems in the Barren River Watershed are addressed in Chapter 6. Chapter 6 also includes comments received during public meetings, links to EPA-approved TMDLs in the watershed, and an assessment of needs for the watershed.

The full Barren River Watershed Water Quality Management Plan can be found at: <http://www.state.tn.us/environment/wpc/watershed/wsmplans/>